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ABSTRACT
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Application for Operational Grant Under E.S.E.A, TITLE III for July 1, 1970 - June 30, 1973

PROJECT SOLVE
(Support of Open Concept Learning Areas Through Varied Educational Teams)

Submitted by
Somersworth School District
in conjunction with

Keene, Mascenic, Franklin
Portsmouth, and Rochester
School Districts

Somersworth, New Hampshire
April 24, 1970
Second Draft

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THE HISTORY OF SOLVE

The SOLVE story started with a series of conversations about an evident need. The open-concept school in the United States, while bearing a relationship to the old one-room school is truly an innovative concept in our society. The teachers, as they enter buildings with this flexibility in arrangement, are quite often uncomfortable, perhaps even apprehensive. They are in a most advantageous position for change, and yet have very few models for change.

The conversations about this need with Richard Green, Paul Heckman, Robert Brunelle, Cliff Wing, and Stuart Pickard caused a survey of the state. The findings showed six schools in operation in our state. Representatives of these six school districts met with Cliff Wing to talk about the possibility of combining their efforts. After some periods of discussion, a planning application was written and subsequently funded.

SOLVE is finalizing its Operational Grant Proposal. It has conducted a Need's Assessment Survey by interview with each superintendent with the principals and using process people with the teachers. There has been an expressed need for staff development. This is certainly the highest level of need and will receive top priority. The other parts of this are dissemination and evaluation.

SOLVE conducted a survey of superintendents in New Hampshire and received an indication that there is a strong possibility for 17 more schools by 1973. This really places a strong responsibility on SOLVE to attempt some models that can be closely evaluated.

RATIONALE

S-O-L-V-E

SOLVE is the name given to an educational project run by local education districts and financed by Federal money given to the New Hampshire State Department of Education under TITLE III of the Elementary Secondary Education Act for new ideas to better meet the needs of children.

It means Support for

Open concept

Learning areas through

Varied

Educational teams

Six school districts which have open-concept schools are co-operating in development of support services for staff and curriculum.

PRINCIPAL	SCHOOL	TELEPHONE
Donald Dunton	Somersworth Middle School Somersworth, N. H. 03878	692-2435
William Ellis	Jonathan Daniels School Keene, N. H. 03431	352-8012
Richard Green	E. Rochester School Rochester, N. H. 03867	332-2146
Mrs. Joyce Hanrahan	Little Harbour Elem. School Portsmouth, N. H. 03801	436-1708
Paul Heckman	Mascenic Regional New Ipswich, N. H. 03071	878-1113
Robert Ross	Paul A. Smith School Franklin, N. H. 03235	934-4144

These schools have as their central goal the individualization of instruction. The philosophy that underlies this attempt might be expressed thus:

"INDIVIDUALIZED INSTRUCTION - One of the most powerful innovations of the last five years is the identification and categorization of possibilities for individualizing instruction.

"Individualization of instruction is now defined as an educational process in which all decisions related to the learning task, the behavior of the learner, and the behavior of the teacher emerge from the diagnosis of each learner. This requires individualized instruction that is geared to the distinctive attributes, needs, and cognitions of the particular person. It does not mean that individuals must be taught singly, with different materials designed for each alone. This instruction requires, however, instructional methods and materials of such scope and flexibility as to reasonably fit the diverse requirements of different individuals.

"Individualization may be accomplished to varying degrees by modifying any one of the aforementioned categories. The master teacher is constantly adjusting all three categories to achieve a program and environment custom tailored to each learner so that he, eventually, can become the decision-maker in charge of his own learning.

"Individualization begins with the category of identification of the appropriate learning task. This implies location of the precise area where accomplished knowledge or performance ends and new learning needs to begin. The learning task may be academic (reading, mathematics, social studies), or it may be a process task (hypothesizing, forming generalizations, evaluating alternatives, or making choices). The task may be in the affective, cognitive, or psychomotor domain. The identification of the task may be determined by the learner, by the teacher, or by both.

"Until the learning task is identified, no other decisions can be made. It is futile to argue about 'discovery' vs. 'telling' or 'discussion' vs. 'lecture' until the educator identifies the learning task to be accomplished. Only then are discussions of methodology relevant.

"The second category to be considered in individualizing instruction is the determination of the learner's behavior so he will accomplish the task efficiently and effectively. Again, this may be the responsibility of the teacher, or the learner or both. This behavior has two reference points. One point is in relation to the task. The behavior of the learner must be appropriate to the particular learning to be accomplished. Writing is appropriate to a spelling task, verbal spelling is not. Discussion is appropriate behavior for refining ideas but not for learning correct pronunciation of a word. There is no one behavior that is universally more effective than another.

"The second reference point for determining appropriate behavior is idiosyncratic. Some learners are more efficient when they work alone; others learn best in groups. Some need to write; others need to talk. The most effective modality varies. Visual stimuli may be more productive for one learner, while auditory or tactile input may accomplish more with another.

"Only when learning behavior is relevant to the task and to the learner's mode can the second category of individualization be implemented. From the decisions made about the task (content) and what the learner will do to accomplish it (behavior) emerges the behavioral objective or the educational target.

"Finally (and it is the final decision for it cannot be made until the decisions are made regarding the learning task and the behavior of the learner), the behavior of the teacher is the third category to be determined as a result of diagnosis of the learner. The teacher will utilize the variables that increase the learner's motivation to accomplish the learning task. From inspection of the task and knowledge about the learner, factors affecting the rate and degree of learning will be adjusted to increase the speed and amount of learning accomplished. Factors that promote retention of the material which has already been learned will be emphasized to facilitate memory. Knowledge about each learner will then be incorporated so his learning will transfer appropriately into new situations.

"Individualization of instruction is best accomplished when the task, the behavior of the learner, and the behavior of the teacher are all determined from a diagnosis of each learner so that decisions can be made to increase the efficiency, effectiveness, and the economy of his particular learning."[1]

SOLVE then is starting down the tenuous path of change acting as the support for the change agents, the member schools. This project would have a small staff functioning to provide resource people, reinforcement people and implementation techniques. The SOLVE schools will provide models for the other schools in the state which are open in architecture and concept. (A recent survey conducted by the SOLVE office reveals that approximately 23 can be expected in the state of New Hampshire by 1972 and 7 of those will be added next year. SOLVE's models for change can help these new schools.

This idea is quite unique in terms of New Hampshire, both in composition of Project and directions of innovation. This project must take a very careful assessment of staff development needs. Then design and test programs for changing staff members.

The models developed must be disseminated for the benefit of the newer schools. The other large segment involved with the SOLVE schools, the community, must be diagnosed and educated in order that the changes that are adopted are permitted to remain and be strengthened in the schools. Models of change here will be studied, implemented, tested and results disseminated to new schools trying to individualize instruction.

1 INNOVATIONS IN THE ELEMENTARY SCHOOL An I/D/E/A Occasional Paper, Individualized Instruction, Madeline Hunter, Dayton, Ohio, 1970.

The League of Cooperating Schools in Los Angeles is the nearest program to SOLVE and this project seems to have more promise to the writer because it has the principal of each school directly involved. Both the League and SOLVE have labeled the principal "the change agent". In SOLVE he has been involved from the inception of the project. This use of "seed" money can be justified for uniqueness and from the standpoint of research as SOLVE can use the research coming from IDEA.

The last thought for a rationale is a quote that epitomizes the work of SOLVE.

"If a fraction of the money that is currently being spent to change educational practice were spent to find out how to succeed in making such change, a great deal would thereby be saved. Few things would be of greater significance today than for a group of behavioral scientists to work with a group of practitioners in an effort to change significant aspects of the educational system...Until we know far more than we know now, it is likely that we shall continue to waste many man-hours of time and countless millions of dollars in abortive efforts to modify educational practice."2

2 B. Othanel Smith, "The Anatomy of Change," *The Nature of Change*, Washington: National Association of Secondary School Principals, 1963, pp. 4-10.

PLANNING

This project was planned under a TITLE III Planning Grant No. 39-69010 issued to Superintendent John Powers, Somersworth, New Hampshire entitled Project SOLVE (Support of Open Concept Schools with Varied Educational Teams).

This application for an operational grant has been prepared with the consultation of H. Stuart Pickard, Director, Planning, Development and Evaluation; R. Cliff Wing, Director, NH-ESEA TITLE III; Howard I. Wagner, Assistant Director, NH-ESEA TITLE III; Paul Heckman, Curriculum Coordinator of Mascenic; Charles Dunton, Principal, Somersworth Middle School; Richard Green, Principal, East Rochester School; Robert Ross, Principal, Paul Smith School; J. William Ellis, Principal, Jonathan M. Daniels School; and Joyce Hanrahan, Principal, Little Harbour Elementary School. Frank Corcoran, Assistant Superintendent was consulted; Kenneth O. Taylor, Jr., Director, Project SOLVE; Ron McIntire, Director, Project PROBE at the Center for Evaluation at U.C.L.A.: Edith Buchanan, Early Childhood Specialist, Doctoral Candidate at U.C.L.A.; Barbara Fischer, Doctoral Candidate at the University of Massachusetts; and consultants for Hawaii, Southern California, Utah and Colorado gave suggestions. Robert Cahill of Heuristics, Inc. was contracted to write the evaluation section to insure quality for a total project evaluation.

The following ERIC documents were used as resource material: Ed014349, ED014785, ED016003, and ED017978. The materials from I/D/E/A were helpful. Dr. Madeline Hunter, Dr. John I. Goodland, Dr. James Popham, Dr. Robert Anderson's writings and et al were consulted frequently as the base line rationale for the format and content of the project.

PREVIOUS PROGRAMS AND FUNDING

This project is designed to apply directly to staff development. All supplementary funds including TITLES I and III to this date in most districts have been spent on equipment and smaller amounts on resources such as faculty development. SOLVE monies would supplement in some of our districts and in all districts this is an exemplary project.

ABSTRACT

The SOLVE story begins with a History of SOLVE and a Statement of Need. The needs of the member schools of SOLVE are nearly all focused on staff development skills. In the section on Staff Development the writers of this project have detailed some expectations for teachers in the individualization of instruction. Also in this section are detailed some aspects of the Process of Teaching, Teaching Skills which consider Group Process to a small degree, and a section on the Principal as Change Agent.

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The evaluation model was done by Heuristics of Massachusetts. It represents the thinking of not only the project writers and heuristics, but also the consultation of H. Stuart Pickard and R. Cliff Wing.

The final consideration was the duality of Project SOLVE and its needs as a Project on the one hand and the needs of the member schools on the other. To this end the Narrative reflects the need for Project SOLVE regarding personnel and its fulfillment of the objectives for the member schools.

NARRATIVE STATEMENT OF NEED

This statement of need was collected through a series of non-directed interviews with superintendents and principals. In a few cases there were teachers consulted on an informal basis revolving around needs of the SOLVE schools.

During the course of the planning grant year there have been many pieces of evidence that demonstrate SOLVE must be considered a major project and an entity. Its primary function is the service of learners by staff development in the member schools for individualized instruction. There are two facets here, then, SOLVE as a project forms one and the serving of the SOLVE member schools forms the second half or component part.

This section deals with the latter component first. The member schools need the support of SOLVE to continue the development of curriculums they have started this year, e.g.

East Rochester - Reading

Keene - ESS Science (Limited Program)

Little Harbour - Exploratory Science Program (Limited Program)

Mascenic - Support Behavioral Objectives (Limited Program)

Paul Smith - IPI Math Program

Somersworth - 1970-71

There is a need to identify specific curriculum requirements for each school, i.e., expectation levels of the school or the community. If there is a very literate group in the community they may expect their children to read fluently in all cases. Possibly as supportive material the schools need curriculum flow charts. These lists are similar to the concept and skills sequences. Curriculum sequences may be only one of the alternatives and then need to be explored. Flow charts might also be labeled concept and skills chart. These charts might present only one of the alternatives and other curriculum alternatives need to be explored.

This consortium of schools has many things in common. One of the most striking commonalities is the need for a continuum of individualization of instruction. At the present time many of our schools would like more positive identification of the factors of individualization of instruction. The continuum would appear to be:

CONTINUUM OF INSTRUCTION

Traditional Schools	VS.	Child-Oriented Schools
Program has rigid adherence to time schedules.		The program is planned in accordance with pupil needs and time allotments are in basic agreement with objectives stated by the school.
Schedules are: a. arranged according to isolated subjects not in blocks of time b. arranged primarily to care for teaching of basic skills c. planned with limited provision for individual differences.		Schedules are: a. arranged in large blocks of time in related areas b. planned so there is adequate balance of time in the basic skills areas, the content areas, and the aesthetic areas c. planned to provide for varied activities in accordance with differences, individual or group d. adjusted to permit experimentation.
		The professional staff is large enough to provide for maximum flexibility.
The usual teaching-learning situation is organized as an assign-study-recite-test formula.		The teacher-learning situation is organized to include teacher planning and teacher-pupil planning.
Readiness for new learning is considered in planning.		Planning is viewed as a process of pupil-teacher interaction, including the development of a desire to learn, and not as a formalized step-by-step process.
		Provision is made for pupil participation in classroom and school management as maturity permits.
		Planning is a continuous process as the teacher seeks to provide those situations which enable the learner to gain, add to, and to reuse in new situations the understandings and generalizations which were developed previously.

	Methods employed are varied and include induction, deduction, those of discovery, creativity, problem solving, search for relationships, development of generalizations and understandings.
Recognition of individual differences is incidental.	Individual pupil purposes and needs are identified; instruction to meet these needs is provided in so flexible a manner as to make long-term groupings impractical.
Grouping is rigid and limited to one or more basic areas.	In addition to "3", guidance is given through wide and varied activities to encourage initiative and imagination in pupils, growth in self-direction, and in analytical and intuitive thinking. The handicapped learner receives appropriate instruction for optimum development. Teaching-learning is based on physical factors, personality factors, mental maturity, academic maturity, and personal interests.
Minimum instructional materials are provided.	Instructional materials are studied by the professional staff and are selected in harmony with the educational purposes and planned program of instruction.
Selection of materials is an administrative responsibility without staff involvement.	Materials are selected cooperatively by the administration and the staff personnel in light of these criteria: a. They are appropriate to the maturity and educational levels of the pupils who use them.

	b. They are many and varied to meet individual abilities and the subject content is authoritative and current. The selection of instructional materials is done on a continuous basis throughout the school year.
Evaluation of pupil achievement is made through the use of teacher-made tests to obtain grades.	Evaluation is an integral part of each educational experience. Various devices are used. Evaluation is continuous and is related to the over-all goals of education.
Evaluation includes subject matter achievement only.	Evaluation includes: an assessment of the school program in terms of its appropriateness to the general goals of education; as assessment of the adequacy and relevance of curriculum practices, procedures, and materials to the objectives of the school; and analysis of pupil accomplishment in terms of academic achievement, social and emotional growth and physical fitness in relation to known potential; ability to apply learnings.
Evaluation is incidental and is not related to the over-all goals of education.	In addition to evidence of growth in knowledge, understandings, and skills evaluation will take into account: active interest of learner, his openmindedness to new ideas, his curiosity and eagerness to learn for the sake of learning, his confidence in seeking answers to problems, and his self concept.
Little provision is made for pupil participation in evaluation.	Provision is made for joint teacher-pupil participation in the evaluation of the school program. The results of the evaluation are used to bring about desirable change in the school program.

CONTINUUM OF INSTRUCTION taken from: Guide for Self-Appraisal and Improvement of Elementary Schools, Evaluative Criteria, The Association for the Evaluation of the Elementary School, Second Edition, 1967.

With such a sample continuum each school could identify its position and make some determinations about next steps.

School and community relations are topics that must be considered by these innovative schools. Some of the situations for concern center around the need for informing the public about the characteristics of the pupils. We have learned and are learning a great deal about learners and learning. This needs to get out to the public. The characteristics of the learner that are different today, e.g., are children coming to us having watched many thousands of hours of television including Sesame Street. Many of them have traveled around the state and around the country. The public and the schools must recognize the influence of the experiences children bring with them. The school would like to learn more ways of getting the message out to the public. This might be accomplished through special programs, radio, television and newspapers.

The SOLVE schools are directly responsible for developing conclusive models of staff development. These schools have some workshops. The issue is that the staffs need education in specific skills, for instance, ways of individualizing as techniques and as tools to meet the needs of individual students. There are people who can instruct in the process of Diagnosis and Prescription, use of Media, Team Teaching and Continuous Progress in classroom situations for the promotion of individualization. These people need to be contacted and brought into workshop situations with the staffs of SOLVE schools. There are other aspects the staffs should work on such as differentiated staffing, creating the independent learner, and application of learning theory. These concepts might be examined in a summer workshop at least initially.

The executive board principals are in need of constant input regarding new programs and new concepts that are being researched, tried, adopted or dropped and other techniques in both administration and supervision. The principals also would benefit from reinforcement of their present efforts and help in evaluating where their schools are and where they need to go next. They also feel a desire to keep abreast of the latest curriculum development including accompanying materials and applications of learning theory.

In all of the above one can see implications for many kinds of training, workshops and conferences. The fulfillment of these kinds of obligations requires not only funds, it also charges an organization to handle great amounts of administrative detail. This project then will need certain kinds of support personnel or positions. It seems the executive committee would be advised to consider a Director, Assistant Director, and a part-time Disseminator. These people would be responsible for organizing resources to meet the needs of the Project Schools.

They would also be concerned with the consulting with other schools in the state going into the open-structure kind of framework, writing papers and using media for state-wide publication of the results of SOLVE.

PROJECT SOLVE AS AN ENTITY

Project SOLVE as an ESEA TITLE III Project is a large project in terms of allotment of TITLE III monies. It is responsible to the people of the state to perform certain functions such as dissemination, model building, testing for the open-concept school and provisions for training experiences in workshops either as consultants or participants. In order to carry on the function of SOLVE effectively, there must be a director, assistant director and secretarial staff. There may be a need for additional Professional People such as a disseminator or a resource team.

Director - The Director of Project SOLVE will be responsible to an Executive Board, presently consisting of representatives from six member schools. He will direct the project as the executive officer. He will make decisions regarding directions of the projects, ways to meet the needs of the member schools, and types of grant awards the project should be applying for at that time. The Director will be responsible for all funds allocated to the project from any source whatsoever. It will be his responsibility to see that the Executive Board members are informed, at least quarterly, of the present financial state of SOLVE. He will be the liaison officer talking in the field with superintendents, teachers, principals and other people that may become involved with Project SOLVE. From these discussions, the Director will coordinate (1) his staff development, (2) implementation of programs to carry out project objectives, and (3) direct evaluation activities. The person filling this position will be accountable for the selection and supervision of the Project SOLVE staff.

Assistant Director - The Assistant Director will be in charge of the office, the budget, the professional library, and the writing of at least twelve proposals for supplementary grants. The above specifications are not to be considered as inclusive. Because of the depth of SOLVE, it is expected that the Assistant Director will also assume other responsibilities as delegated by the Director.

Disseminator - The disseminator of this project should be trained in public relations. His foremost assignment will be to get the SOLVE schools before the public on television, on radio, in the newspaper, and in magazines. His secondary responsibility is to work with the communities in such a way that community feelings are revealed to the principal so that communication will be facilitated. It is planned at this time that the disseminator will be a part-time position. The dissemination person might be hired either in conjunction with another TITLE III project or with State TITLE III.

Resource Team - The SOLVE Project may employ a Resource Team. This is a team of three or four specialists in curriculum areas. These people must possess an expertise in their own curriculum speciality and also have the ability to apply the cognitive, affective, and psychomotor domains. The team would be expected to fulfill the objectives of SOLVE. They would spend six weeks in each SOLVE school that requested them. Duties would include consulting with teachers, diagnosing and instructing children, and participating in team meetings. The team has a responsibility to assess need and develop workshops on the basis of needs of teachers. They might feed the director the information and he would establish the workshop based on their feedback. Other important duties would include making of one or two model units of individualization for a school or a team in order that they may start writing a continuum.

Office Staff - The support staff for 2 1/2 professional people will consist of an executive secretary who is an expert in typing, and who can take shorthand, and who can generally perform the expectations of executive secretary. It will be her responsibility to see that all documents leaving the office are properly signed, are neat in appearance, and are a good representation of Project SOLVE to the public. She will be further responsible for the total production of the office on the clerical side. She will be expected to keep track of deadlines and remind the professionals of forthcoming deadlines, such as the notices of SOLVE meetings going out a week before the meeting (the agenda and summary), and phoning in changes in salary schedules to the fiscal office. She will maintain calendars for the three professionals. There should be a second support staff member.

This member would be responsible for the bookkeeping, purchase orders, being sure that supplies or reference materials requested by the principals are ordered and followed through to completion. The time of this second support person would look like this: two days a week doing the bookkeeping, the petty cash, that kind of detail work; and three days a week typing roughs of proposals, letters, typing off tape recorded interviews, meetings, occasional conferences, or any types of transcription that need doing.

In addition to the full-time secretarial help, there will be provision for a part-time person probably a high school boy to run the machines.

Executive Board - Project SOLVE will have a policy-making board composed of a voting member from each school district included in the project. This member will be from the school and spend 80% of his time in that school.

New Members

A. Criteria For New Membership:

1. The school must be working to individualize instruction in their present building.

2. The school must be planning the construction of an architectually open school within two years.

3. In general, a school will not be brought into the Project SOLVE consortium unless there is a two-year time lag between planning and building such a school. There will be a review process in order to ascertain the degree of individualization and openness proposed.

4. The staff must be committed to summer and in-service workshops. The design for workshops will not be acceptable if previous research and experience has shown such a design to be ineffective.

B. Procedures for Entrance to:

1. The Executive Committee is responsible for decisions about admissions of new schools and for reviewing membership of current member schools.

a. Admission Procedure shall be:

(1) Submission of a document demonstrating for new membership had been met.

(2) The school itself will finance an educational audit to determine in fact, that the information provided in item a. is correct.

(3) Upon the satisfactory completion of 1. and 2. and upon a favorable vote of the executive committee, the school will be invited to send a non-voting member for one year.

(4) Upon the satisfactory completion of 3. the school will be eligible to participate as observers in staff development activities of Project SOLVE Schools.

(5) Upon vote of the Project SOLVE Executive Committee the school may be admitted as a full member.

b. Procedures for Review and Revocation of Present Member Schools:

(1) Upon the 2/3 vote of member schools, a Project School may be voted out.

STAFF DEVELOPMENT

I. Introduction

It can be safely said that the goal of SOLVE is Individualized Instruction. Individualized Instruction is an ideal and defined: as an educational process in which all decisions related to the learning task, the behavior of the learner, and the behavior of the teacher emerge from the diagnosis of each learner. This requires individualized instruction that is geared to the distinctive attributes, needs, and cognitions of the particular person. It does not mean that individuals must be taught singly, with different materials designed for each alone. This instruction requires, however, instructional methods and materials of such scope and flexibility as to reasonably fit the diverse requirements of different individuals.1

In order to move towards individualization, four areas must be considered by the teacher:

A. Knowledge and implementation of curriculum organization

B. Knowledge of the factors of the teaching process

C. Acquisition of Teaming Skills

D. Changing role of the principal

Further, it is realized by the writers of this project that the goals and objectives discussed below have a hierarchical structure. Therefore, before one would attempt an organizational structure such as team teaching, he must first gain knowledge of curricular patterns and then implement these patterns by using knowledge of the teaching process. In order to allow this process to happen, the conventional role of the principal must change.

II. Goals

A. Curriculum Organization

1. In each curriculum area instruction is organized by the teacher so that pupils work with skills, behaviors, concept development, habits, attitudes and appreciations.

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1 INNOVATIONS IN THE ELEMENTARY SCHOOL, An IDEA Occasional Paper.

a. The teachers will make, adopt or process either a skill and/or concept flow chart for each curriculum area with which they are dealing.

Evaluation - Does each teacher of a curriculum area have in writing a skill or concept flow chart?

b. The teachers will develop a chart or list of psychomotor skills which are applicable for their students.

Evaluation - Has the teacher a list of psychomotor skills or learnings each student in her class needs to use?

c. The teachers will develop a chart or list of attitudes, appreciations, and/or habits which they wish to develop within their students.

Evaluation - Do the teachers have a list of attitudes, appreciations, and/or habits which they wish to develop within their students?

d. The teachers will look at the lists of skills, concepts, habits, etc. and determine by making an appropriate mark which are required; which are prerequisites; and which can be learned at any point in time.

Evaluation - Does the teacher have a list of skills, concepts, and habits determined for appropriateness which are required, which are prerequisites and which are timeless?

e. The teachers will select the necessary materials to support the chosen objectives.

The materials might be teacher-made, student-made, or purchased by the project or district. Materials might be brought in by students or teachers. Materials is meant to be an all inclusive term from the sand in a sandbox in kindergarten through textbooks to biological specimens and chemicals in the laboratories of a high school.

Evaluation - Did the teachers select appropriate materials to meet the needs of the students?

B. The Process of Teaching

1. To gain knowledge about teaching-learning styles in a classroom situation.

a. The teacher will identify at least five out of the ten learning styles listed below with at least twenty youngsters.

"A relatively recent concept which emerged out of the experience and discussions of knowledgeable teachers is the idea that there are different, identifiable ways in which students *approach* learning. 'Learning style' is a useful term to explore this complicated phenomenon. At this point in the evolution of the art and science of teaching, there is insufficient research either to completely define or to predict and document the significance of learning style and its consequences in education.

(1) "The Incremental Learner - This student proceeds in a step-by-step fashion, systematically adding bits and pieces together to gain larger understandings. An analogy to bricklaying is appropriate with larger structures emerging from the careful and at times tedious adding of piece upon piece. There are students who apply this style in mathematics, reading, history, and in every other curricular area. Perhaps this type of learner benefits most from contemporary programmed materials.

(2) "The Intuitive Learner - This student's learning style does not follow traditional logic, chronology, or a step-by-step sequence. There are leaps in various directions, sudden insights, meaningful and accurate generalizations derived from unsystematic gathering of information and experience. The quality of his thinking generally exceeds his verbal ability to describe the steps by which his conclusions are reached. It is easier to describe from the hindsight point of view how he learned some concept than to predict in advance the steps by which he will learn.

(3) "The Sensory Specialist - This student relies primarily on one sense for the meaningful formation of ideas. While his other senses are intact and functioning, one tends to predominate. Among these learners, the most commonly identifiable styles are the visual and the auditory learners. As the labels imply, the visual

learner gains much more from seeing or reading about the phenomenon to be learned, while the auditory learner craves for oral explanations, recordings, or lectures. In the past, not fully cognizant of these differences, many teachers have used multisensory methods which, in shotgun fashion, reached many of the students. The shotgun method is not particularly efficient and carries the implicit danger of boredom due to repetition and because the particular 'sensory speciality' is but a small segment of the presentation.

"The sensory specialist style of learning has been recognized by various educators. Russell and Fea, for example, state that 'Children are visually, auditorily, or kinesthetically oriented concerning ability to learn. Perhaps teachers need diagnostic devices to determine which avenue of learning is the best for an individual child, so that a clear, definite, unified pattern of a symbol is possible for that child.'1

(4) "The Sensory Generalist - This student uses all or many of his senses in gathering information and gaining insights. He will rely on sight, could, touch, smell, and any other relevant sense to gather ideas and to test them against the data his various senses provide.

"Related to the sensory generalist is the oversensitive learner. This oversensitivity is not used in the psychological sense but refers to the learner who constantly has all of his 'antenna' out to receive sensory stimuli from all sources. Unless he is helped to block out some stimuli, he is unable to make use of those most relevant to desired learnings. This type of learner may have to function in a setting where some sensory deprivation is purposely arranged. Students can often be helped to develop or 'beef up' certain sensitivities over others.

1David A. Russell and Henry R. Fea, Research on Teaching, N.L. Gage (Ed.), Handbook of Research on Teaching, Chicago: Rand-McNally and Company, 1963, p. 882.

"Example: While most students learn with the aid of all of their senses, some examples of oversensitive learners are needed.

"There is the case of Charlie who, in order to focus on his basic number facts, must be partially isolated from his peers. He is so keenly aware of sights, sounds, and even smells in his environment that his awareness interferes with his focusing on a task. Judy was significantly helped by her teacher when she moved from a central location in the classroom so that she would not be surrounded on all sides by stimulating movement and color.

(5) "The Emotionally Involved - There are students who function best in a classroom in which the atmosphere carries a high emotional charge. At least two types of such classrooms can be identified. The first one provides the emotional color and vividness of a learning atmosphere through the teacher's use of poetry, drama, lively descriptions, and his own obvious enjoyment and involvement in the substance of learning. The second type of emotionally involving classroom is one in which the teacher and students carry on active, open discussions wherein disagreements are common. Strong positions are stated, defended, adopted or discarded after dynamic interplay of ideas and activities; the teacher is an active participant in the process. In both such classrooms, the emotional tone is easily visible or perceivable to the observer, although the former tends to focus on the subject matter while the latter tends to focus on interpersonal relationships or disagreements.

(6) "The Emotionally Neutral - Some students function best in a classroom where the emotional tone is low-keyed and relatively neutral. Interpersonal conflicts are subdued; the immediately perceived tone of the class is intellectual rather than emotional. The teacher tends to focus on the task at hand in a rather objective fashion, minimizing the emotive coloration of his behavior and helping students move increasingly from emotional expression to intellectual understanding and

analysis. The student whose learning style falls under this category tends to be threatened or distracted in the previously discussed classroom of high emotional atmosphere.

(7) "Explicitly Structured - This student learns best when the teacher makes explicit a clear, unambiguous structure for learning. The limits and goals are carefully stated, guiding the intellectual tasks to be achieved as well as the behaviors which will be acceptable and unacceptable in the classroom. This student functions best when he feels safe and at home in a well-defined structure. An open-ended, loosely structured learning setting interferes with his style and thus lessens his learning.

(8) "Open-Ended Structure - There are students who feel at home and learn best in a fairly open-ended learning environment. The overall structure of the classroom is sufficiently visible, yet there is place within it for divergence, for exploration of relevant yet not explicitly preplanned phenomena. A tight structure is resisted by such a student because he tends to feel claustrophobic and to see connections between what he is learning and many other facets of life.

(9) "The Damaged Learner - While this category is too broad, too inclusive to be identified as *a* learning style, it is sufficiently important and commonplace to merit discussion. There are students who are physically normal yet damaged in self-concept, social competency, aesthetic sensitivity, or intellectual development in such a way as to develop what might be called 'non-learning' or negative learning styles. The disability is superimposed on his otherwise identifiable learning style. They may systematically avoid learning, reject learning, fantasize, or pretend that they know or can learn. We can contrast them with their counterpart, 'normal learners' who might be temporarily scared, or who have not as yet learned to be autonomous in learning. The damaged learners need special attention and special treatment depending upon their particular damaged approach to the learning situation. It

is suggested that a case study be made of this kind of student in order to have a defensible diagnosis and to formulate a program to reduce or eliminate the damage.

(10) "The Eclectic Learner - Students who can shift and function profitably with some variety of learning styles may find one or another style most beneficial, but they can adapt to and benefit from a variety. Historically, this type of student tended to succeed in most of our institutions, for they adapted themselves from classroom to classroom and thus used whatever style paid off at the moment to best advantage. Teachers tended to prefer such learners since the learners made the necessary adjustments and the teachers could continue with their own *teaching styles*."2

Evaluation - Has the teacher evidence in writing of five out of ten learning styles present in a group of learners for whom he is responsible?

2. By either observing himself or having a colleague observe him, the teacher will identify himself as, the task-master, cooperative planner, the child centered, subject centered, learning centered, emotionally exciting and its counterpart, dependent, interdependent, and/or counterdependent.

   a. "The Task Master - This teacher constantly prescribes the materials to be learned and demands specific performance on the part of the students. Learnings to be accomplished are unilaterally specified and an explicit system of accounting keeps track of how well each student meets the stated demands.

   b. "The Cooperative Planner - This teacher tends to plan the ends and means of instruction with the cooperation of his students. He is still 'in charge' of the learning process; from his adult experience and with professional competence, he guides the learning of his students. The voices of the learners are not only heard but are also respected. The learning process is cooperatively planned and conducted. This teacher tends to support and encourage student participation at all levels.

2 COLORADO DEPARTMENT OF EDUCATION/DENVER, COLORADO, Byron W. Hansford--Commissioner of Education, Denver, 1968. Title: QUALITY AND THE SMALL SCHOOLS.

c. "The Child Centered - This rarely found teacher seems to abdicate his responsibilities. Whatever the students want to do, whatever interests them, they may pursue. The genuinely emergent curriculum would fit this style, for preplanning by the teacher always takes a back seat to the interest and curiosity of the child. This style is not only extremely rare, it is almost impossible to imagine in its pure form because the classroom, with its adult-controlled environment, will influence the learners and automatically encourage some interests and discourage others. A poorly functioning 'cooperative planner' style can be mistaken for a 'child centered' one.

d. "The Subject Centered - The other side of the foregoing coin is the teacher who focuses on organized body of content to the near exclusion of the learner. By 'covering the subject', he tends to satisfy his conscience even if little learning takes place. The caricature of this style is the teacher who remarked at the end of a day, 'I taught so well; too bad they didn't learn.'

e. "The Learning Centered - This teacher has a clear explicit respect for his students *and* for the curricular objectives to be reached, the materials to be learned. He rejects the over-emphasis of both the 'child centered' and the 'subject centered' styles and constantly emphasizes the concern: 'How do I help *these* students with their current abilities and disabilities develop toward our next substantive goals as well as in their autonomy in learning?'

f. "The Emotionally Exciting and its Counterpart- This teacher's classroom reflects his own intensive emotional involvement in teaching. He tends to enter the teaching-learning process with zeal and usually produces a classroom atmosphere of excitement, conflict, debate, and high emotional tone. His counterpart conducts a classroom of subdued emotional tone, where rational processes predominate and the learning is dispassionate though it might be justified as significant and meaningful as in the classroom of the emotionally more involved teacher."3

3 IBID., Previous Page

g. Counterdependent-personality style of operation is usually very authoritative. - This person usually very dominant in manner, seldom lets any situation arise without meeting it head on.

h. Interdependent--a personality style of working with people in a cooperative, concerned manner facilitating the growth of all those involved in the learning process.

i. Dependent - This style of operating with people is characterized by standing in the shadow type of activity. This type of person rarely exhibits a dominant attitude toward anyone or any situation. The teacher who suffers discipline problems may be an example of a dependent personality.

Evaluation - Have the teachers identified themselves as task-master, cooperative planner, the child centered, subject centered, learning centered, emotionally exciting, dependent, interdependent, and/or counterdependent?

3. Given all of the students for whom the team is responsible, a team of teachers will identify at least three of the styles of objective number one present in the group. They will then identify their own styles of teaching as suggested in objective number two. Finally, they will match teaching styles with learning styles, each appropriate for the other.

Evaluation - Does the teacher have evidence in writing that the learning styles are matched to the teaching styles either by grouping or some other technique?

4. Given a group of students, the teachers will determine who is a dependent learner and who is an independent learner for the given objectives or objective using the criteria below or criteria developed by them.

a. "Most Dependent Behavior in Group - In using teacher as learning resource, the child *is very dependent on teacher for direction and support in order to achieve*. Constantly asks, 'What do I do next?' 'Is this all right?' Cannot see own realistic goals, or *avoids contact with teacher*. Turns away, avoids eye contact, does not ask for help when needed.
Involvement: The child *is not in control of his ability to focus on classroom activities*. Is easily distracted by extraneous stimuli, does not distinguish relevant from irrelevant activity or ideas. *never or seldom shows enthusiasm about, or interest in, tasks*. Rarely

smiles, or volunteers ideas, or uses past experience, or brings in helpful materials. *demonstrates few expressions of thoughtful work.* Satisfied with few disjointed sentences in written work, does not ask relevant questions, contributes unrelated or inappropriate ideas in discussions and conferences.

b. "Most independent Behavior in Group - In using teacher as learning resource, the child *is independent.* Can set own goals, choose appropriate alternatives to accomplish goals, proceed systematically toward goal, evaluate honestly. Makes a judgment as to when the teacher is the appropriate resource in this process. When he needs help, often turns to several reasonable resources to solve problem without teacher's guidance.
Involvement: The Child *has a long attention span for classroom activity.* Resists inappropriate distraction from learning. *shows enthusiasm and interest in learning task.* Often contributes, searches out relevant materials at home and library, relates past experience with new ideas. *evidences thoughtful work in most learning tasks.* Willing to edit and polish written work, takes time to prepare and practice oral presentations, asks relevant questions, contributes appropriate ideas and information. Can express orally, or in written form, the criteria for a good job."4

Evaluation - Can the reader determine from the evidence presented who is an independent learner in a group of children and who is a dependent learner?

5. To gain knowledge and make decisions related to the various levels of the cognitive, affective, and psychomotor domains.

   a. The teachers will show knowledge of the taxonomical levels of the cognitive area by teaching at least three lessons during which time various students are moved fromone level to a higher level of cognition (recall ---- knowledge ---- application ---- analysis ---- synthesis ---- evaluation).

4 Elementary School, Chicago Press, Lewis & Barbara Fischer, March, 1969.

Evaluation - Does the teacher have in writing three lessons demonstrating how children were moved from level to level in the cognitive domain?

b. The teachers will show knowledge of the taxonomical levels of the affective area by teaching at least three lessons during which time an observer will be able to see that the teacher has chosen the appropriate degree of internalization of the affective area: (1) receiving (awareness); (2) responding; (3) valuing the attitude, interest, or appreciation: (4) organize it into his value system; (5) characterizes his behavior if he has internalized it.

Evaluation - Was the teacher observed by a colleague to see if she had chosen the appropriate degree of internalization of the affective area:

(1) receiving
(2) responding
(3) valuing
(4) organizing
(5) internalizing

c. The teachers at any level or area will demonstrate knowledge of the taxonomical levels of the psychomotor domain by teaching at least two lessons during which time they move youngsters in the five levels of the domain:

(1) perception
(2) set to perform
(3) guided response
(4) mechanized response
(5) complex overt fully automated response

Evaluation - Does the teacher have evidence of two lessons taught in which learners moved along the continuum of psychomotor domain taxonomy.

6. To apply the Popham model, which facilitates individualization of instruction by using behavioral objectives in the classroom.

a. The teacher will select and organize content to be learned in a manner consistent with both the logic of the content itself, the psychological demands of the learner, and the demands of society.

(1) The teacher will demonstrate knowledge of scope and sequence of his subject matter by providing either his own or a commercially published skill and concepts flow chart which would incorporate state minimum standards.

Process - Since teaching is a decision-making process the teacher must have and demonstrate a knowledge of the scope and sequence of the subject matter to be taught. Therefore, at the end of five weeks each teacher will have in writing a skill and concepts flow chart which incorporate state minimum standards.

Evaluation - At the end of the five weeks each teacher has the skill and concepts flow chart as described above.

(2) The teacher will gather data about each child by using any means.

Examples of data - attitudes, interest, family status, socio-economic conditions.

Evaluation - Does the teacher have in his folder a summary of data collected on each student for whom he was responsible?

(3) The teacher will gather data about the community from which his students come, i.e., educational expectations of the community, religious persuasions, organizations, governmental structure, etc.

Evaluation - The teacher will gather data about the community from which his students come, i.e., educational expectations of the community, religious persuasions, organizations, governmental structure, etc.

b. The teacher will plan for instruction by formulating objectives in terms of behavior which is observable and measurable.

(1) For at least ten lessons presented, the teacher will have an instructional objective written.

Evaluation - Does the teacher have in his folder a collection of ten lessons presented using written instructional objectives?

(2) The teacher will demonstrate an awareness of informal evaluation techniques.

Evaluation - Does the teacher have a summary showing different methods of informal evaluation techniques.

d. The teacher will employ appropriate strategies for the attainment of desired instructional objectives.

(1) The teacher will select the appropriate learning alternative for each learner as a result of preassessment.

Example - Learning Theory
Graduated Sequence
Individual Differences
Small Group

Process - Once the teacher has completed the preassessment of a learner, the consultant and participant will plan the appropriate learning opportunity. In making this decision they will take into consideration learning theory, individual differences, graduated sequence, appropriate grouping.

Evaluation - Does the teacher's folder contain three written applied learning opportunities?

(2) The teacher will be able to select and plan learning activities which incorporate the following principles of learning retention, reinforcement, motivation, transfer, by:

(a) Observing another colleague's class and being able to identify two of the principles of learning being used by the colleague.

Process - To facilitate learning, it is planned to have one consultant available who has worked extensively with the utilization of learning theory and critiquing criteria for the teaching-learning act.

Evaluation - Every time a teacher critiques a peer, himself, or the consultant he will identify the principles of learning in writing and keep them in a folder.

(b) Planning instruction for a group of youngsters so that during the instructional time he will utilize at least three of the principles of learning discussed previously.

Evaluation - Does the teacher's folder contain three lessons which he taught which contain a process utilizing at least two of the principles of learning mentioned above?

e. The teacher will evaluate instructional outcomes in terms of behavioral changes.

(1) Given precise instructional objectives, the teacher will:

(a) Select from alternatives those evaluation procedures which are suitable for the objectives.

Evaluation - Does the teacher's folder contain at least three lessons which also contain written evaluation procedures for evaluating the instructional objectives?

(b) Decide, if the student proceeds to the next objective; if the student receives more instruction or if the objective was inappropriate. He will describe in writing at least three situations in which one of the three of the above decisions was made. He will give an explicit rationale for each.

Evaluation - Does the teacher's folder contain at least three lessons which also contain three evaluations which tell why a youngster moved to the next objective; received more instruction; or the objective was decided to be inappropriate?

C. Acquisition of Teaming Skills (Group Process)

1. Two or more teachers assume responsibility for a group of learners in order to cooperatively plan, teach, and evaluate mutually agreed upon objectives, which result in cooperative re-planning, teaching, and evaluating.

Objective - At least two teachers will cooperatively plan on a regularly scheduled basis by sitting down at least once a week for the purpose of:

a. Writing objectives

b. Discussion of individual students

(1) Pre-assessment (diagnosing)
(2) Emotional and social strategies

c. Application of learning opportunities - ways of individualizing--grouping.

d. Evaluation

Procedure -

a. The teachers will plan for teaching by formulating objectives in terms of behavior which is observable and measurable and writing this down according to performance criteria.

b. The teachers as a team will discuss individual students doing both a written pre-assessment (diagnosis and written strategies for social and emotional growth if a student seems to need this.

c. The team will plan the needed learning opportunities as a result of their diagnosis. The team will also demonstrate that they are using learning theory in the appropriate places and at the appropriate times.

d. The team will evaluate progress by demonstrating the success of each student along a continuum of behavioral objectives.

Evaluation - The team will have written records demonstrating their proficiency in the above procedures.

Objective - The team will have a facilitator who will summarize action taken at a meeting.

a. To keep a record of action taken

b. To develop a case study of teaming at the schools.

Procedure - The facilitator needs to keep a record of the action taken in order that there be follow through on team decisions and reference data available regarding actions and planned strategies of the team.

The facilitator will keep this record of team meetings in order that the team and other teams have a case study of each team to provide better strength in teaming.

Evaluation - Do the team minutes reflect a record of action taken and are they detailed enough to provide a case study?

The team will reach decisions and reflect the decisions reached in the team minutes, regarding the logistics of their team of students.

Procedure - In a team meeting the necessary details of functioning as a unit will be resolved, i.e., the entrance procedures and timing sequences for all students in the room in order that each student understand the limitations and expectations that exist in the room.

Evaluation - Do the team minutes reflect these decisions?

Objective - The team will write a schedule for the conduct of team affairs, use of specialists and meetings with children.

Procedure - All people in the school need to have a schedule in order that specialists are used to best advantage, that team meetings be held on time and that other school members may join in if interested including principal and other teachers.

Evaluation - Are team events scheduled, including specialists and team meetings?

Objective - The team will write a strategy for Public Relations including three parent visitation days.

Procedure - Team teaching is still a new innovation to most communities. In order to feel a part of things parents and other members of the community need to be brought in. Teachers are the most effective public relations people a school has.

Evaluation - Do the team minutes reflect the three parent visitation days and a written evaluation of each one of the days?

D. The Principal as Change Agent.

1. The principal will motivate his staff to change as well as overcoming inherent problems.

a. With his faculty, the principal will develop a two-way system of communication which has as its components frequent communication and goal setting for both teachers and principal.

Rationale - The principal must establish a communication which not only allows him to express concern, attitudes, and feelings, but also allows faculty members a channel to react to his opinions as well as their own. This feedback should come often, not only during scheduled meetings, but whenever the need arrives.

From the situation of trust, the principal and faculty can then set out to establish common goals as well as ways to go about achieving these goals.

In the end, the principal and faculty, should be functioning so that, communication is frequent and spontaneous. The group can set goals and accomplish those goals, and feedback is inherent in the process.

Evaluation - Was a two-way system of communication developed which had as its components frequent communication and goal setting by both teachers and principals? In which ways was it not? How could it be improved?

b. The principal will establish and make known, both the rewards system and the criteria for rewards.

Rationale - "The reward individuals receive for involvement in the change operation will influence their willingness to give their time and talent. These rewards may be either material or psychological--a larger paycheck or emotional satisfaction. The kinds of rewards available for meeting the change agent's expectancies should be made known to those involved in the change process. A teaching staff should know whether a proposed change will result in increased prestige, an increase in pay, or an increase in instructional efficiency.

In our society people tend to think of rewards in terms of increased monetary return, but research suggests that psychological rewards are frequently more powerful. The satisfaction that a committee teacher feels when she sees her students doing better in a changed instructional situation is likely to be a sufficient reward. Such satisfaction is not translatable into dollars and cents. However, if monetary rewards *are* utilized in the change process, they should be made realistic and *permanent* so that expectations for rewards are not crushed once the change has been brought about.

There is a definite reward in the process of accomplishing change. The teacher to whom change is being suggested should be helped to see and understand that he has it within his power to bring it about--that he has the ability to successfully manipulate the factors involved in the proposed change. A negative attitude about the possibility of obtaining the change causes individuals to become indifferent and sometimes obstructionistic. The origin of a negative attitude can often be traced to the fact that those involved really had no idea what the proposed change would demand of them in terms of skills, attitudes, or knowledge. An example is the teacher who rebels against nongrading because he has no understanding of what the individualization of instruction implies and because he sees it as completely opposed to traditional teaching. Had he been helped to see that the new approach still demanded utilization of many traditional classroom skills, his unwillingness to attempt the change might have been radically altered."4

Evaluation - Was a reward system made known? What were the criteria for the reward system? Were the criteria made known? A questionnaire which utilizes similar questions as those above could be given to staff and administration.

c. The principal will exhibit the characteristics identified by Likert:

"(1) They are guided by the fact that any new practice must give promise for improving both attitudes and productivity.

4 THE PRINCIPAL AND THE CHALLENGE OF CHANGE, Page 42-43

(2) They rapidly sense any unfavorable shift in attitude among their subordinates and promptly change or stop the activity responsible for the undesirable shift.

(3) They avoid putting greater hierarchical pressures on workers to increase production.

(4) They tend to use principles and practices of management which yield better communication and better decisions."5

by being evaluated according to the above criteria by their staff members at the beginning and end of the year.

Evaluation - At the beginning of the school year (70-71), Project SOLVE will develop a pre-assessment instrument, which will utilize Likert's criteria and be given to each teacher to determine their perception of the principal.

A second form of this instrument will be developed for the end of the year and administered at the end of the school year.

2. The principal will develop a decision-making process.

a. The principal will involve teachers in instructional decisions i.e., groupings--staff organization.

Rationale - "Griffiths contends that '...it is the function of the executive to see to it that the decision process proceeds in an effective manner...In fact, the executive is called upon to make a decision only when the organization fails to make its own decision. To put this into other words, if the executive is personally making decisions, this means that there exists malfunctioning in the decision process.' Griffiths further states: 'The effectiveness of a chief executive is inversely proportional to the number of decisions which he must personally make concerning the affairs of the organization.

5 Renis Likert, NEW PATTERNS OF MANAGEMENT, New York: McGraw-Hill Book Co., 1961. p. 78.

It is not the function of the chief executive to make decisions; it is his function to monitor the decision-making process to make certain that it performs at the optimum level."6

Evaluation - A questionnaire will be circulated to all staff members which asks as one of its questions "Were you involved in all instructional decisions in which you thought you should be? If not, in which decisions were you not involved?"

b. The principal will assume the role of a facilitator in the decision-making process by monitoring the procedure in group processes and decision making.

"To function as a decision-making monitor, a principal must be a capable resource person. A teacher has a right to expect the principal or members of his supportive staff (librarian, instructional materials specialist, vice-principal, central office personnel) to serve as sources of information. The principal does not have to be knowledgeable about all areas of instruction, but he should know what information is available. For example, a principal might not know the results of the latest research on the ITA program, but he should be able to suggest persons who have this knowledge, or journals where such information is available. He should be aware that an adjacent school district experimented with the program last year and is welcoming observers this year; that several research proposals to study ITA are being sponsored by the Cooperative Research Bureau of the U. S. Office of Education; that the curriculum library has several journals devoted entirely to the ITA approach in reading. If a teacher's interest continued, the principal, as a good resource person, might offer to write to the company producing ITA for sample material, request that the district's reading consultant visit the school, or propose discussing the topic at the next staff meeting if the teacher thought it would be useful.

"The principal, as a resource person, finds himself in a position similar in responsibility to that of the librarian. No one expects the librarian to understand everything about photosynthesis and protozoa, but most persons believe he should know that additional information may be found, for example, by consulting

6 Daniel E. Griffiths, ADMINISTRATIVE THEORY, New York: Appleton-Century-Crofts, Inc., 1959, p. 73.

The Reader's Guide, by writing to the county and state science societies, by checking appropriate catalogues, and by examining selected issues of scientific journals.

"A resource person not only acts as a source of data for teachers, but also serves as a source of promising and innovative ideas. The principal is often the only person in the school organization who has the flexibility of time to gather resource ideas. He visits the central office and the various federally and privately financed projects, meets with the superintendent of schools and his staff, visits other schools, and attends regional and national conferences. As a result, he can keep abreast of developments in the field and know about a variety of educational resources available in the school district and the community."7

Evaluation - As part of the questionnaire in (a), the teacher and principal will answer a question such as: Did the principal (and his staff) help in the area of decision-making and group processes? If not, why not? (Please cite samples.)

c. The decision-making group will list at least three goals to be accomplished at a meeting and then meet the goals listed.

Evaluation - Did the group set at least three goals at a meeting and then meet these goals?

7 THE PRINCIPAL AND THE CHALLENGE OF CHANGE, Page 45 and 46.

Preliminary Evaluation Design

I. Staff Development

Assessment of the effectiveness of the staff development efforts of Proje-t SOLVE will be made on three levels.

1. Cognitive

2. Affective

3. Operational

In each of the principal areas of staff development activity, Process of Teaching Teaming Skills, and Popham Model implementation, the product and process objectives fall into these three levels.

Cognitive Outcomes

It is essential that a certain amount of information on the rationale for, and techniques associated with, learning theory, teaming, and the behavioral objective methodology be transmitted to those teachers participating in the program. They must be exposed to information in these areas (process goals); but more importantly, must retain much of the content and methods displayed (product goals).

Affective Outcomes

For the benefits of the program to extend into the classroom, outcomes in teachers must go beyond cognitive acquisition to affective acceptance. Teachers must come to realize the benefits to be derived through use in the classroom of the Popham model. Development of positive attitudes on the part of teachers (product objectives) are critical to the extension of these procedures into the regular school year. Accordingly, the objectives at this level will be evaluated closely.

Operational Outcomes

Knowledge of the cognitive base and expression of positive attitudes toward the desired instructional procedures do not insure widespread use in the classroom. Periodic monitoring of administrative, supervisory, and teaching activities will be made, to document the extent of implementation. Comparative studies will be made to identify differences in the practice of program participants and to identify the sources of those differences. Examination of selected background characteristics such as age, teaching experience, prior attitude, etc. will be made to identify any relationships operating which either hinder or foster success of the project.

A. Curriculum Organization

The principal evaluative criteria to be used in curriculum organization will be the extent to which those operational activities specified earlier are present. In addition, pre- and post-assessment will be made relative to the following cognitive and affective behaviors.

Teachers and administrators will:

1. when asked to express in writing the rationale for the use of scope and sequence charts, include in in their statement 80% of the reasons for their use.

2. exhibit favorable attitudes toward the utility of scope and sequence charts in instruction.

3. given a specific learning outcome, e.g. mastery of long division, identify the separate learning tasks involved, specify the order if any in which they must be taught and relate them to antecedant and consequent learning activities.

B. Process of Teaching

Evaluation of this section will follow closely the model of cognitive, affective, and operational outcomes specified above.

Cognitive tests will be prepared measuring teacher and administrator learning in:

Learning styles

Teaching styles

Learning Modes

Taxonomy levels

Principals of Popham Model

Measures of attitudes on the utility in the classroom of each of these areas will be prepared. Acitivity checklists for criteria specified under Evaluation will be prepared for process evaluation.

C. Acquisition of Teaming Skills

Further specification of the principles of Teaming will be required in preparation of a test of cognitive skills in Teaming. Selected sources such as Team Teaching, Shaplin and Olds, 1964, will be employed for this purpose. A measure of

affective acceptance of this as a useful teaching technique will be constructed. Also, operational criteria as specified will be used in the preparation of an activity checklist for process evaluation.

D. Principal as Change Agent

As the instructional leader in the school, each principal should be knowledgeable in principles and techniques involved in all staff development activities. Positive attitudes on the part of the principals are essential to the successful introduction of the innovative practices. Therefore, all cognitive and affective instruments prepared for teachers will also be administered to principals. Knowledge of the rationale for a mode of administrative operation that fosters change is necessary. Likewise is the acceptance of these techniques as effective methods for the introduction of change. Cognitive and affective instruments will be prepared measuring both of these areas. Activities later specified will serve as the basis for the operational evaluation checklist.

Instrumentation

Required tests, attitude scales, and activity checklists will be prepared by Heuristics, Inc. Further specification of objectives required for this instrument construction will be the responsibility of the SOLVE staff with necessary technical assistance to be provided by Heuristics. Administration of instruments will be done in so far as possible by SOLVE staff with periodic auditing of results by Heuristics. Process objectives, particularly for the Resource Team activities and specification of content for cognitive test are the areas that will receive primary attention early in the evaluation.

Evaluation Training

In order to develop a group of local personnel trained in the evaluation of open concept instruction, training sessions will be conducted by Heuristics. To be included in these sessions are:

1. Rationale for the inclusion of the various elements of the evaluation plan - cognitive, affective, and operational - product and process.

2. Theoretical framework supporting the inclusion of the specific objectives of the project.

3. Training in the use of all instruments prepared for use in the evaluation.

Evaluation
Dissemination

Mindful of the long range nature of the desired outcomes of the dissemination activities of SOLVE, the evaluation for the first year will be process rather than product oriented. Over the long term it may be possible to examine all stages of the four-step model of awareness, interest, trial, and adoption. However, initially only those process objectives for dissemination as specified will be evaluated. Procedurally this will be done via the construction of an event schedule for dissemination followed by periodic monitoring of the activities according to the established standards of performance.

	Days
June	
Specification of Objectives	
Director	2
Schools	6
Instrument Design and Construction	5
July	
Design and Construction of Instrument for Observation and Interviews	2
Sept. 15 - Oct. 15	
Planning and Operation of Training sessions	5
Observation and Interviews-Formative	6
Oct. 15 - May 15	
Periodic Monitoring of Classroom	7
Analysis and Formative Feedback	3 1/2
Dec. 15	
Analysis of Data	2
Preparation of Interim Report	3
May 15 - June 15	
Observation and Interviews-Summative	6
Redesign of Evaluation	3
June 15 - July 15	
Analysis of Data	4
Preparation of Final Report	6
	60 1/2

(Preparation of Final Report will be both formative and summative in nature and will address itself to the process and product goals.)

June | July | August | September

Instrument Design and Construction

Further Specification of Objectives

Planning and Operation of Training Sessions

Periodic Monitoring of Classroom

Instrument Construction

Evaluat Traini Progr

September | October | May | June | July

Analysis of Data for First Half Year

Periodic Monitoring of Classroom

Observations and Interviews Formative

Preparation of Interim Report

Observations and Interviews Summative

FINAL REPORT

Evaluation Training Program

Process Evaluation

Redesign of Evaluation

DISSEMINATION

The following techniques or strategies shall be used for dissemination.

"Technical strategies for the dissemination of new knowledge and ideas must be sequentially plotted and carefully brought into being if changes and new ideas move from the innovative and suspect to the common and accepted way of doing things.

"Characteristics, including attitudes, values, interests, and needs of each audience or each group of users of research findings, should be known to disseminators if maximum results are to accrue from the dissemination process. Audience analysis, in essence, should be the very basis of content and its presentation as well as a fundamental process for the determination of dissemination techniques.

"Dissemination techniques should be considered in a pragmatic manner: techniques which produce anticipated results should be kept and used; others should be revised or discarded and a search begun for other strategies. Experimentation and innovation should be stressed as Research and Planning strives to make known educational findings.

"It has been learned that liberal investments in dissemination activities pay rich dividends; however, if funds and personnel are limited, efficiency can more nearly be achieved by concentrating efforts on audiences with expressed needs and interests and by timing delivery in terms of the urgency of consumers.

"Possible Techniques of Dissemination

"Dissemination, for the most part, uses two primary devices; mass communication and interpersonal contacts.

Mass Communication

The printed or duplicated page, with its many advantages and its certain disadvantages

abstracts
summaries
bibliographies
facsimile documents

Current publications, such as staff bulletins, subject area and service newsletters, the Public School Bulletin, special curriculum brochures and study guides, North Carolina Education and Teachers' Record, research journals at the college and university level, et al.

News releases and feature stories for newspapers, radio, and television

Photographic approaches (microfiche, slides, filmstrips, motion pictures, video-tape recordings, photographs) accompanied by lecturer in person or on tape.

Interpersonal Contacts

Visits to area or local groups, with emphasis on a productive give-and-take atmosphere, which might be achieved through the workshop approach, the use of audiovisual aids, the involvement of interested citizens other than administrative and teaching personnel in the schools, the involvement of group leaders, interaction within small groups, etc.

Use of knowledgeable consultants. Research shows that if one wants to change people, the big name or the person with superior knowledge should be used.

Demonstration or face-to-face involvement. This implies the provision of an opportunity for the target system to examine and assess the operation qualities of the invention. This, in turn, implies interaction. Demonstration projects should be regarded as another feasible means of disseminating new ideas and procedures -- whether conducted in local school districts or in State-sponsored experimental centers.

State, regional, and local district conventions, institutes, workshops, and committee meetings should be used when feasible as convenient occasions for reporting pertinent findings and their implications for education.

Interschool visits by teachers and administrators should be encouraged as another method of publicizing successful experimental projects.

Criteria for Information to be Disseminated

Clarity: Information should be clearly stated with a particular audience in mind.

Validity: Information should present a true picture.

Pervasiveness: Information should reach all of the intended audiences.

Impact: Information should evoke response from the intended audience.

Timeliness: Information should be disseminated at the most opportune time.

Practicality: Information should be presented in the form best suited to the scope of the project, considering such limitations as distance and available resources.

Emphasis on Use of Local Strategies

"Local administrative units should be encouraged to assume initiative in broadening dissemination activities undertaken at the State level. Moreover, local units should be encouraged to initiate strategies of their own, especially as local action research results in promising practices.

Group Versus Individual Utilization of Messages

"Users will be served as groups whenever possible because of the efficiency which can be gained in this manner. It is through this wholesale method that time is gained to serve the individual needs which must be met in an individual manner. Service priorities should favor those groups which make the greatest contribution to the overall progress of education in the State. Individual priorities, almost out of necessity, should be in terms of individual identification with important groups."8

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8 Dr. Voster M. Mulholland, Position Paper: DISSEMINATION POLICIES AND PROCEDURES, DIVISION OF RESEARCH AND PLANNING; North Carolina State Department of Public Instruction.

PARTICIPATION OF OTHER AGENCIES

The other school districts that will be directly involved are: Franklin, Keene, Mascenic, Portsmouth, and Rochester. These districts will share equally with Somersworth in the project.

The State Department of Education will participate with the consultants from the Division of Instruction, also the thoughtful advice of R. Cliff Wing, Director NH-ESEA TITLE III; H. Stuart Pickard, Director, Planning, Research and Development; and Robert Brunelle, Deputy Commissioner of Education.

The Paul Smith School in Franklin has participation from Plymouth State College in the Teacher Education Program. This school also has Project PRIDE - a TITLE VI Project for Handicapped Children and a volunteer aid program.

Jonathan M. Daniels School has a volunteer aid program, and acts as a model for teacher education for Keene State College.

Little Harbour Elementary School has an Early Childhood Education Team working in the school and has had a small TITLE III project for designing education for the future.

The MAT program at the University of New Hampshire has fellows in some of the SOLVE schools at varioud times.

The Dartmouth-Lake Sunapee Cooperative School Project is building models for teacher education, which SOLVE schools may eventually form linkages.

Somersworth has an EPDA Project in activity centered classrooms. The students from these schools are coming into the middle school next year.

PHASE-OUT OF FEDERAL FUNDS

This project could be continued in a variety of ways. The districts could train new staff taking them through the steps that have been determined as necessary ones. The local districts cannot be expected to do meaningful staff development kinds of exercises until the steps are delineated and tested. This writer foresees the strong possibility that this "seed" money could attract more money and as a result the emphasis of the project could shift from three years to a longer period of time.

Personnel Requirements

for Project SOLVE

The following professional positions would be envisioned in Project SOLVE full time: Director ($14,000 - $17,000), Assistant Director ($10,000), a half-time Disseminator ($10,000), possibly four Resource Teachers ($12,000 each), Secretary-Stenographer and one Clerk, or Accountant. (See page).

OFFICE SPACE AND EQUIPMENT

Project SOLVE will lease quarters from the State TITLE III Office at 64 North Main Street in Concord, New Hampshire. It will have to purchase some new desks and filing cabinets as the first operational year commences and staff are added to the project.

SUB-CONTRACTING

The SOLVE Project as an entity may do very small minor sub-contracting. The sub-contracts would probably not exceed $1,000 in most cases. Certainly a contract would not run beyond the end of one fiscal year. Responsibility for the control and supervision would be retained with the Project Director.

SECTION A continued

12. Maintenance of Fiscal Effort: Report non-federal funds only.

	Per Pupil in ADA	To
a. Second preceding year - FY ending June 30, 68	$414.10	
b. Preceding Year - FY ending June 30, 69	417.00	
c. Estimated current budgeted expenditures, FY ending June 30, 70	478.00	

13. Numbers of Congressional Districts Served: Two

14. Total Number of Local Educational Agencies Served: Six

15. From the total number of persons served, or to be served, give the percent of children from families with an annual income of $2,000 or less: 7.3 %

SECTION B -- BUDGET SUMMARY

1.

	Beginning Date (Month, Year)	Ending Date (Month, Year)	Funds Requested
(a) Initial Application or Resubmission (First Budget Period)	July 1, 1970	June 30, 1971	$150,000
(b) Application for First Continuation Grant (Second Budget Period)			
(c) Application for Second Continuation Grant (Third Budget Period)			
(d) Total Inno. Program Funds Requested			
(e) End of Budget Period Report			

2. Complete this Item only if the project involves the lease, or remodeling of facilities for which funds are requested.

Descriptor	Funds Requested: First Budget Period	Second Budget Period	Third Budget Period
a. Site Improvement	$	$	$
b. Lease	$	$	$
c. Remodeling	$	$	$
d. Total	$	$	$

DEPARTMENT OF EDUCATION
TITLE III, ESEA APPLICATION

PART I, STATISTICAL REPORT

SECTION A -- PROJECT INFORMATION

1. Reason for Submission of Form:
   (a) _____ Initial Application
   (b) _____ Resubmission
   (c) _____ Application for Continuation
   (d) _____ End of Budget Period Report

2. Major Description of Project: (a) _____ Innovative (b) _____ Service

3. Project Title: (Five words or less)

Support for Open Concept Learning Areas Through Varied Ed. Teams

4. Applicant: (Local Educational Agency)

Supervisory Union # 56

5. Address: Memorial Drive
(Street)

Somersworth, New Hampshire 03878
(City) (State) (Zip Code)

6. County: Strafford

7. Congressional District Number One

8. Project Director: Kenneth O. Taylor, Jr.

9. (a) Address:

64 North Main Street
(Street)
Concord, New Hampshire 03301
(City) (State) (Zip Code)

(b) Phone: 271-3482

(c) Area Code: 603

10. (a) Person Authorized to Received Grants John Powers
    (b) Title or Position: Superintendent of Somersworth School District

11. (a) Address:

Memorial Drive
(Street)
Somersworth, New Hampshire 03878
(City) (State) (Zip Code)

(b) Phone: 692-2169

(c) Area Code 603

I hereby certify that the information contained in this application is to the best of my knowledge correct, and the Local Education Agency named above has authorized me as its representative to file this application.

_____ _____
(Date) Signature of Person Authorized to

SECTION C -- DATA ON SCHOOL ENROLLMENT AND PROJECT PARTICIPATION

1.

			Pre-Kinder-garten	Kinder-garten	Grades 1-6	Grades 7-12	Adult	Other	Total
(a)	School Enrollment in the Geographic Area to be Served	Public		225	10,175	8,730			19,130
		Non-Public							
(b)	Persons Participating in Project	Public							
		Non-Public							
		Not Enrolled							
(c)	Number of Staff Members Engaged in In-Service Training for the Project							Public	135
								Nonpublic	

Total 19,265

2. Total Number of Participants by Ethnic Groups:

American Indian	Mexican American	Negro	Oriental	Puerto Rican	White	Other (Specify)	TOTAL
		10			19,255		19,265

3. Rural/Urban Distribution of Participants:

Participants	Rural		Metropolitan Area		
	Farm	Non-Farm	Central City Low Socio-Economic Area	Suburban	Other Urban
Percent of Total Number Served	5%	%	%	%	95%

SECTION D - TITLE III PROJECT STAFF - ALL PROJECT ACTIVITIES DURING FISCAL YEAR

PERSONNEL PAID BY TITLE III FUNDS

TYPE OF PAID PERSONNEL	Reg. Staff Assigned to Project				New Staff Hired For Project			
	NUMBER FULL-TIME	PART-TIME NO. OF PERSONS	PART-TIME FTE	TOTAL FULL TIME EQUIV. (Col. 2+4)	NO. FULL TIME	PART-TIME NO. OF PERSONS	PART-TIME FTE	TOTAL FULL TIME EQUIV. (Col. 6+8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. ADMINISTRATION/ SUPERVISION	1			1	1			1
2. TEACHER:								
(a) Pre-Kindergarten								
(b) Kindergarten								
(c) Grades 1-6								
(d) Grades 7-12								
(e) Other								
3. SUBJECT-MATTER SPECIALISTS (Artists Scientist, Musicians etc.)								
4. TECHNICIANS (Audio-visual, Computer Specialists, etc.)								
5. PUPIL PERSONNEL WORKERS (Counselors, Social Workers, Psychologists, Attendance Workers)								
6. MEDICAL AND PSYCH. PERSONNEL								
7. RESEARCHERS, EVALUATORS								
8. PLANNERS AND DEVELOP.								
9. DISSEMINATORS (Writer Publ. Rel. Personnel, Editors, etc.								
10. Other Professional,								
11. Para-Professional, Teacher Aides, etc.								

SECTION E -- PERSONS TO BE SERVED BY THE PROJECT

1. Number of Pupils, Pre-Kindergarten Through Grade Six:

PROGRAM/SERVICE	Pre-K	K	1	2	3	4	5	6	Total 1-6	Number of Nonpublic Pupils	Estimated Cost
IMPROVE CURRICULUM		225	293	233	250	240	428	385	2054		
Performing Arts											
Foreign Language											
Humanities											
Language Arts											
Mathematics											
Science											
Social Studies											
Voc. Ed./Indus. Arts											
Other (Specify)											
EDUCATIONAL TECHNOLOGY											
Media											
Computers											
TV/Radio											
Other (Specify)											
IMPROVE INSTRUCTION											
Scheduling											
Individual Instruction											
Other (Specify)											
REMEDIAL/SPECIAL EDUCATION & PUPIL PERSONNEL SERVICES											
Handicapped											
Remedial Reading											
Medical/Dental/Health											
Social/Psychological											
Educational Guidance											
Other (Specify)											
INVOLVE COMMUNITY OR [illegible] TO COMMUNITY											

SECTION E -- PERSONS TO BE SERVED BY THE PROJECT

2. Number of Pupils Grade Seven Through Twelve and Adult and Out of School Youth:

PROGRAM/SERVICE	7	8	9	10	11	12	Total 7-12	Total K-12	Adult	Out of School Youth	Number of Nonpublic Pupils	Estimated Cost
IMPROVE CURRICULUM	1449	1376	1677	1547	1368	1313	8730	18905				
Performing Arts												
Foreign Language												
Humanities												
Language Arts												
Mathematics												
Science												
Social Studies												
Voc. Ed./Indus. Arts												
Other (Specify)												
EDUCATIONAL TECHNOLOGY												
Media												
Computers												
TV/Radio												
Other (Specify)												
IMPROVE INSTRUCTION												
Scheduling												
Individual Instruction												
Other (Specify)												
REMEDIAL/SPECIAL EDUCATION & PUPIL PERSONNEL SERVICES												
Handicapped												
Remedial Reading												
Medical/Dental/Health												
Social/Psychological												
Educational Guidance												
Other (Specify)												
INVOLVE COMMUNITY OR SERVICES TO COMMUNITY												

SECTION E -- PERSONS TO BE SERVED BY THE PROJECT

3. General Services:

PROGRAM/SERVICE	Estimated Cost
Development, Evaluation, Planning or Dissemination Activities	$50,000
Better Utilization of In-service Education of Instructional Personnel	$100,000
Service Centers Serving a Large Area	$
Programs for Institutional Improvement (School Management, Reorganization, Administration)	$

SECTION F -- MAPS OF THE AREAS TO BE SERVED

To be prepared and inserted by applicant LEA.

SECTION G -- OTHER SOURCES OF SUPPORT

Source of Support	Estimated Amount
ESEA Title I	$ 12,126
ESEA Title II	$ 3,100
Other Federal: _____	$
_____	$
Other State: _____	$
Private Foundation	$
Local	$
Other: _____	$
TOTAL	$ 15,226

CRITIQUING
The Teaching and Learning Acts

Behavioral Objectives

Can the person visiting discern what the teacher is expecting from the learner or learners?

Were the performance standards clear?

Was each instruction clear to all children?

Were directions written so that each child could read for himself?

Behavior of the Teacher

1. Does the teacher demonstrate Transfer of Knowledge Theory, Retention Theory, Reenforcement Theory, and Motivation Techniques?
2. Did the teacher hold the children accountable?
3. Did she push the children to examine their thinking process?
4. Did she demonstrate an understanding of sequence and organization?
5. Did she focus on the task?
6. Did she reenforce the child without making him a teacher pleaser? Examples:
   (a) You have done very well.
   (b) That was a good piece of thinking.
7. Did she force learners to catagorize?
8. Did she need to learn to extend skills through labeling, lowering the level of difficulty?

Behavior of the Learner

1. Did the learner demonstrate
   (a) that the learning task was appropriate?
   (b) that he had been properly diagnosed?
   (c) that he had been made aware of his needs, weaknesses, etc.?
2. Was he able to categorize?
3. Was he able to label?
4. Was he able to sequence?

APPENDIX

PROPOSED BUDGET FOR PROJECT SOLVE

Account Number	Account		Amoun
110.1	Director		$ 15,00
	Assistant Director		10,00
	Dissominator		10,00
110.5	Secretary		5,00
	Typist-Bookkeeper		4,50
110.9	Additional Clerical Help		50
215	Curriculum Materials		20,00
230	Materials and Supplies for Office		2,00
	Administrative Expense		1,90
	Evaluation		7,50
235.1	Consultants for Workshops, Conferences, etc.		10,00
290.1	References and Professional Literature		1,00
290.2	Office Rental		2,00
290.3	Dissemination Materials: Photos, Slides, Tapes, Reports, etc.		1,00
290.4	Director's Travel:	In-State	1,00
		Out-of-State	50
		Other Travel	50
290.5	Staff Development		48,00
290.5A	East Rochester - $8,000		
290.5B	Franklin - 8,000		
290.5C	Keene - 8,000		
290.5D	New Ipswich - 8,000		
290.5E	Somersworth - 8,000		
290.5F	Portsmouth - 8,000		
290.6	Travel for School Personnel		5,00
645	Telephone and Electricity		1,00
850	F.I.C.A., Blue Cross, Retirement		1,60
1267	Office Equipment		2,00
		TOTAL	$150,00

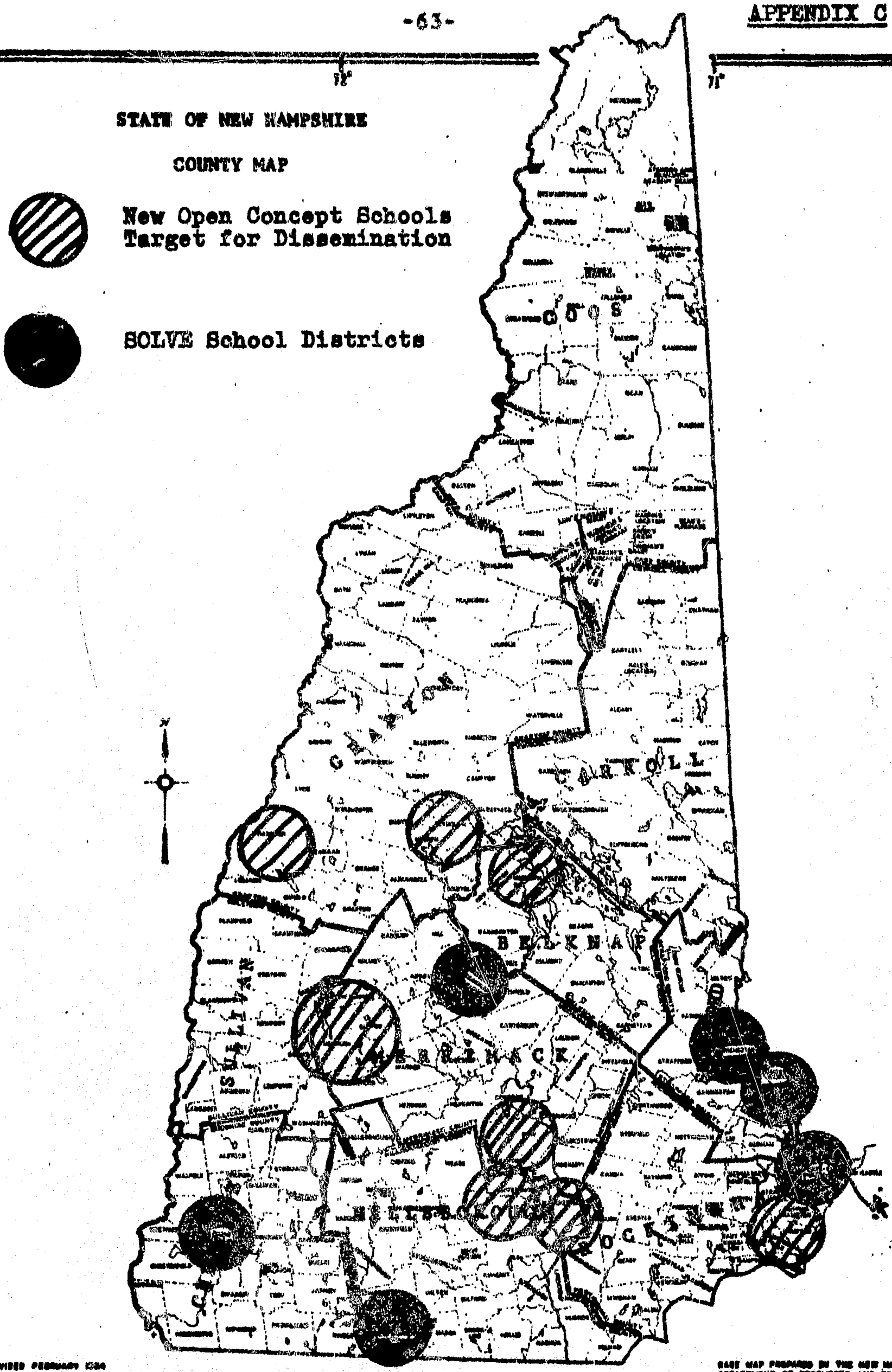
APPENDIX C

STATE OF NEW HAMPSHIRE

COUNTY MAP

New Open Concept Schools
Target for Dissemination

SOLVE School Districts



REVISED FEBRUARY 1984

BASE MAP PREPARED BY THE NEW HAMPSHIRE DEPARTMENT OF RESOURCES AND ECONOMIC DEVELOPMENT

CHART OF MONIES PAID TO DISTRICTS OR TO THE PERSONNEL FROM THE DISTRICT

APPENDIX I